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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/032,923	12/28/2001	Peter Thomas Camble	30014513-1	8030

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HEWLETT-PACKARD COMPANY
Intellectual Property Administration
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EXAMINER

HOSSAIN, TANIM M

ART UNIT	PAPER NUMBER
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2145

DATE MAILED: 03/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/032,923	Applicant(s) CAMBLE ET AL.	
	Examiner Tanim Hossain	Art Unit 2145	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 December 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12/28/01 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>05/21/04</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3, 4, 5, 7, 8, 9, and 10 are rejected under 35 U.S.C. 102 (b) as being anticipated by Isfeld (U.S. 5,802,278).

Isfeld teaches:

1. A method for providing a peripheral device virtual functionality overlay for a data library, said method comprising: intercepting commands to a library data transfer element within a bridge disposed between a command initiator and said library (column 9, lines 24-27); passing through commands that can be carried out by said data transfer element to said data transfer element (9; 28-42); and executing, with said bridge, commands addressed to said data transfer element that cannot be carried out by said data transfer element (9; 28-42).

3. The method of claim 1 further comprising: responding to said initiator as a data transfer element capable of carrying out said command (9; 28-42).

4. The method of claim 1 further comprising: comparing a command initiator's unique host device identifier to a list of unique host device identifiers authorized to issue commands to said data transfer element (8; 30-56).

5. The method of claim 4 further comprising: maintaining said list of unique host device identifiers in said bridge (45; 49-54).

7. The method of claim 4 wherein said unique host device identifiers are internet small computer systems interface names (9; 28-42).

8. The method of claim 1 further comprising: determining which data transfer element in said library said command is directed to by using a look up table maintained on said bridge (column 10, line 62 – column 11, line 6; column 45, lines 49-54).

9. The method of claim 8 wherein said determining step is carried out at least in part based on a unique host device identifier associated with said initiator (9; 28-42, 45; 49-54).

10. The method of claim 1 wherein said commands that cannot be carried out by said data transfer element include at least one command from the group of commands consisting of: data mover commands, error recovery commands, caching commands, error logging, diagnostic logging, error management, diagnostic management, data compression commands, data encryption commands, and provision of statistics (9; 28-42).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 6, and 11-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Isfeld in view of Nolan (U.S. 6,446,141).

As per claim 2, Isfeld teaches the method of claim 1, but does not specifically teach the partitioning of the library. Nolan teaches the partitioning of a library in a SAN (Nolan: 5; 44-50). It would have been obvious to one of ordinary skill in the art at the time of the invention to include the partitioning of a library as taught by Nolan in the system of Isfeld. The motivation for doing so lies in the fact that having a partitioned computer library would provide limited access for certain users, where the library can be shared among these users, without these users overlapping into other users' possessions. Both inventions are from the same field of endeavor, namely the efficient computer execution of commands.

Isfeld-Nolan further teaches:

6. The method of claim 4 wherein said unique host device identifiers are fiber channel world wide names (Nolan: 7; 1-20).

11. The method of claim 1 wherein said initiator is a host connected to a storage area network wherein said storage area network is comprised at least in part of said data library (Nolan: 6; 64 – 7; 20).

12. A peripheral device virtual functionality overlay system for a partitioned data library, said overlay system comprising: a lookup table that indicates unique host device identifiers authorized to access each of said data transfer elements of said library (Isfeld: 44; 54-58, 45; 49-54); and a bridge disposed between a storage area network and said partitioned data library, wherein said bridge comprises firmware that uses said lookup table to determine whether a host initiating commands directed to a data transfer element of said library is authorized to issue commands to said data transfer element, wherein said bridge firmware passes through to said data transfer element authorized commands that can be carried out by said data transfer element and wherein said bridge firmware intercepts and executes commands directed to said data transfer element that cannot be carried out by said data transfer element (Nolan: 6; 64 – 7; 20, Isfeld: 45; 49-54).

13. The system of claim 12 wherein said bridge responds to a host initiating a command that cannot be carried out by said data transfer element as a data transfer element capable of carrying out last said command (Isfeld: 9; 28-42).

14. The system of claim 12 wherein said unique host device identifiers are fiber channel world wide names (Nolan: 7; 1-20).

15. The system of claim 12 wherein said unique host device identifiers are internet small computer systems interface names (Isfeld: 7; 36-54, 8; 30-56).

16. The system of claim 12 wherein an identity of said data transfer element is determined from said lookup table at least in part based on said unique host device identifier associated with said host (Isfeld: 8; 30-56, 45; 49-54).

17. The system of claim 12 wherein said commands that cannot be carried out by said data transfer element include at least one command from the group of commands consisting of: data mover commands, error recovery commands, caching commands, error logging, diagnostic logging, error management, diagnostic management, data compression commands, data encryption commands, and provision of statistics (Isfeld: 8; 30-56, 45; 49-54).

18. A partitioned storage area network with an attached data library, said network comprising: a data storage array divided into partitions; said library comprising: a plurality of library partitions corresponding to said array partitions (Nolan: 5; 44-50); a plurality of data transfer elements each of said data transfer elements assigned to one of said library partitions (Nolan: 5, 40-50); a plurality of data storage element slots, each of said slots assigned to one of said library partitions; and a library controller that defines a virtual controller for each of said

library partitions, said virtual controllers directing movement of data storage media to and from slots assigned to a same of said partitions and to and from data transfer elements assigned to a same of said partitions, said slots and said data transfer elements assigned to a same of said partitions (Isfeld: 9; 28-42); and at least one bridge disposed between said array and said library, wherein said bridge passes through authorized commands that can be carried out by one of said data transfer elements to said one data transfer element and wherein said bridge intercepts commands directed to said one data transfer element that cannot be carried out by said one data transfer element and executes said commands that cannot be carried out by said one data transfer element (Isfeld: 9; 28-42).

19. The network of claim 18 wherein said bridge comprising a lookup table that indicates unique host device identifiers authorized to access each of said data transfer elements of said library (Isfeld: 45; 49-54).

20. The network of claim 19 wherein said unique host device identifiers are fiber channel world wide names (Nolan: 7; 1-20).

21. The network of claim 19 wherein said unique host device identifiers are internet small computer systems interface names (Isfeld: 9; 28-42, 7; 36-54).

22. The network of claim 19 wherein an identity of said data transfer element is determined from said lookup table at least in part based on said unique host device identifier associated with said host (Isfeld: 9; 28-42, 45; 49-54).

23. The network of claim 18 wherein said bridge responds to a host initiating a command that cannot be carried out by said one data transfer element as a data transfer element capable of carrying out last said command (Isfeld: 9; 28-42).

24. The network of claim 18 wherein said commands that cannot be carried out by said data transfer element include at least one command from the group of commands consisting of: data mover commands, error recovery commands, caching commands, error logging, diagnostic logging, error management, diagnostic management, data compression commands, data encryption commands, and provision of statistics (Isfeld: 9; 28-42).

25. The network of claim 18 wherein data mover interconnectivity extends between said array and said library, via said at least one bridge, and said data mover interconnectivity is partitioned and assigned to said corresponding library and array partitions (Isfeld: 9; 28-42, Nolan: 5; 40-50, 45; 49-54).

26. The network of claim 18 wherein said at least one bridge is a fiber channel-to small computer networks interface bridge (Nolan: 7; 1-20).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. Elliot et al (U.S. 6,335,927) teaches the method of providing a required QoS in a hybrid network.


b. Eastep et al (U.S. 6,731,625) teaches a method of providing call back architecture in a hybrid network.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tanim Hossain whose telephone number is 571/272-3881. The examiner can normally be reached on 8:30 am - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Valencia Martin-Wallace can be reached on 571/272-6159. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tanim Hossain
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